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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mark Gonikberg

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22120

7590

05/17/2004

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EXAMINER

LUGO, DAVID B

ART UNIT

PAPER NUMBER

2634

9

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/658,754

Applicant(s)

GONIKBERG, MARK

Examiner

David B. Lugo

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34,36,37 and 39-42 is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9,13-19,21,22,24-29,32 and 33 is/are rejected.
- 7) ☒ Claim(s) 6,10-12,20,23,30,31,35,38 and 43-55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Regarding the information disclosure statement filed 2/5/01, ITU-T Recommendation G.992.2 has been considered, an initialed copy of the IDS being submitted herewith.

### ***Response to Arguments***

2. Applicant's arguments filed 3/3/04 regarding the rejection of claims 1-3, 5, 7, 9 and 13-15 under 35 U.S.C. § 102(b) as being anticipated by Bremer et al. have been fully considered but they are not persuasive.
3. Regarding claims 1 and 13, applicant argues that Bremer does not teach the limitations of "signals being sent according to a communication protocol allowing variability in the one or more characteristics, the one or more characteristics varying for at least some implementations of the communication protocol." The examiner respectfully disagrees.
4. In the previous Office action mailed 12/1/03, it is stated that Bremer et al. teach a technique for automatic identification of a remote modem by evaluating the frequency characteristics of signals sent by a remote modem to a local device. The "frequency characteristic" is considered to be a characteristic varying for at least some implementations of the communication protocol. Thus, a signal sent from a certain type of modem includes one set of frequency characteristics (i.e. including a low-level identification tone), while a signal sent from a different type of modem includes a different set of frequency characteristics (i.e. not including a low-level identification tone). Bremer et al. is thus considered to teach all of the limitations of claim 1.

Art Unit: 2634

5. Regarding claim 3, applicant states that Bremer does not teach or suggest every limitation, namely that “the remote communication device is determined according to at least one brand, type or model.” However, as stated in the previous Office action, Bremer et al. teach the characterization of a remote modem as having a particular type. Upon a close examination of the claim language, the claim simply requires that **at least one** of the brand, type or model be determined. That is, if any one of a brand, type or model is determined, the claim limitation is satisfied (see MPEP § 2131). Thus, since Bremer et al. teach determining a type of modem based on the frequency characteristics, Bremer et al. is considered to teach the limitation.

6. Applicant’s arguments, see page 12, with respect to the rejection of claim 4 under 35 U.S.C. § 102(b) as being anticipated by Bremer et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view a newly applied prior art reference.

7. Applicant’s arguments, see final paragraph of page 13, with respect to the rejection of claim 13 under 35 U.S.C. § 102(b) as being anticipated by Maxwell have been fully considered and are persuasive. The rejection has been withdrawn.

8. Applicant’s arguments, see page 14, with respect to the rejection of claims 13-15 under 35 U.S.C. § 102(b) as being anticipated by Amundson have been fully considered and are persuasive. The rejection has been withdrawn.

9. Applicant’s arguments filed 3/3/04 regarding the rejection of claims 24-29 and 33 under 35 U.S.C. § 102(b) as being anticipated by Amundson have been fully considered but they are not persuasive.

Art Unit: 2634

10. Regarding claim 24, applicant argues that sampling a signal to determine if a particular character is embedded in the signal is not the same as measuring a parameter associated with the signal. The examiner respectfully disagrees, as the presence of a particular character is broadly considered to be a parameter associated with one or more signals sent during a communication session. Amundson is thus considered to teach all of the limitations of claim 24.

11. Regarding claim 27, applicant argues that the one or more signals with which the parameters are associated are sent during at least one of transceiver training and channel analysis. However, as recited in column 5, lines 66-68, the signals are sent during receiving modem initialization, which is broadly considered to meet the limitation of transceiver training.

12. Regarding claim 28, applicant argues that measuring a number of symbols sent is not the same as sampling a signal to look for a particular character. However, the presence of a character provides an indication of a number of symbols sent, that is, either zero or one. The presence of a character is therefore broadly considered to meet the limitation of the one or more parameters being the number of symbols sent.

13. Applicant's arguments, see page 16 with respect to the rejection of claim(s) 16-19, 21 and 22 under 35 U.S.C. 103(a) as being unpatentable over Amundson have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view a newly applied prior art reference.

14. The rejections of claims 1-3, 5, 7, 9 and 13-15 under 35 U.S.C. § 102(b) as being anticipated by Bremer et al., claims 24-29 and 33 under 35 U.S.C. § 102(b) as being anticipated by Amundson, claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Bremer et al., and claim 32 under 35 U.S.C. § 103(a) as being unpatentable over Amundson, are maintained.

Art Unit: 2634

15. New rejections of claims 1, 2, 4, 5, 7, 13-19, 21, 22, 24-27, 29, 32 and 33 are made in view of U.S. Patent 4,849,989 to Kamerman.

*Claim Objections*

16. Claims 7, 22-33, 35, 38 and 43-55 are objected to because of the following informalities:

- a. Claim 7, line 2, "and analog modem" should be --and an analog modem--.
- b. Claim 22 recites the limitation "the identification" in line 3. There is insufficient antecedent basis for this limitation in the claim.
- c. Claim 23, line 3, "the measured duration" should be --a measured duration--.
- d. In each of claim 24, line 6; claim 29, line 1; claim 50, line 7; and claim 54, line 1; "the device" should be --the device operable to measure one or more parameters-- in order to distinguish "the device" from "the remote communications device".
- e. Claim 25, line 2, "compare" should be --comparison--.
- f. Claim 35, line 1, "the identity" should be --an identity--.
- g. Claim 38, line 2, "and analog modem" should be --and an analog modem--.
- h. Claim 43, line 9, "the measured duration" should be --a measured duration--.
- i. Claim 51, line 2, "compare" should be --comparison--.

Appropriate correction is required.

17. Claims 10-12, 30 and 31 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 34, 41, 42, 50 and 55, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Art Unit: 2634

18. Claim 49 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations of claim 49 are already recited in parent claim 43.

***Claim Rejections - 35 USC § 102***

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. Claims 1-3, 5, 7, 9 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bremer et al. U.S. Patent 5,311,578.

21. Regarding claim 1, Bremer et al. teach a technique for automatic identification of a remote modem by evaluating the frequency characteristics of signals sent by a remote modem to a local device as it is determined whether an answerback tone is detected (Fig. 5 – step 505), wherein if the answerback tone is detected, the frequency characteristics of the received signal are compared to the characteristics of a particular modem type by determining whether a low-level identification tone is included with the answer tone (steps 510, 530).

22. Regarding claims 2 and 3, if the low-level tones are identified, the remote modem is characterized as a particular type of modem (col. 5, lines 41-47).

23. Regarding claim 5, identification of the modem type as the same type as the local device will allow for additional features desired by the customer that are considered to enhance communication between the devices (col. 1, lines 42-64).

Art Unit: 2634

24. Regarding claim 7, the remote device is one of an analog modem and a digital modem.

25. Regarding claim 9, identification of the modem type as the same type as the local device will allow for additional features desired by the customer that are considered to enhance performance (col. 1, lines 42-64).

26. Regarding claim 13, Bremer et al. teach an apparatus for automatic identification of a remote modem by evaluating the frequency characteristics of signals sent by a remote modem to a local device as it is determined whether an answerback tone is detected (Fig. 5 – step 505), wherein if the answerback tone is detected, the frequency characteristics of the received signal are compared to the characteristics of a particular modem type by determining whether a low-level identification tone is included with the answer tone (steps 510, 530).

27. Regarding claims 14 and 15, identification of the modem type as the same type as the local device will allow for additional features desired by the customer that are considered to enhance communication between the devices (col. 1, lines 42-64).

28. Claims 24-29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Amundson U.S. Patent 4,680,773.

29. Regarding claim 24, Amundson teaches a communications system utilizing a multi-mode modem where the modem 13 measures a parameter associated with signals sent by a remote device by sampling received characters, and compares the sampled characters to determine if the character necessary for initiating a matched-protocol link is detected (col. 6, lines 1-5). The modem inherently contains a storage element containing the character necessary for initiating the matched-protocol link in the comparison.



Art Unit: 2634

30. Regarding claim 25, the modem provides optimized data transmission and error correction when operating the special matched-protocol mode (col. 3, lines 21-30).

31. Regarding claim 26, the remote modem is identified as a modem supporting the matched-protocol mode.

32. Regarding claim 27, the signals are sent during training or initialization of the transceiver (col. 5, lines 50-68).

33. Regarding claim 28, the one or more parameters is the presence of the character necessary for initiating the matched-protocol link.

34. Regarding claim 29, the device is a modem 13.

35. Regarding claim 33, the modem comprises a general purpose processor 18 (Fig. 2).

36. Claims 1, 2, 4, 5, 7, 13-15, 24-27, 29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamerman U.S. Patent 4,849,989.

37. Regarding claim 1, Kamerman teaches a master modem receiver 80 that evaluates the frequency characteristics of signals transmitted in synchronism with a training sequence in order to identify the remote modem transmitting to the master modem (col. 5, lines 58-60), where the identifying signals are considered to be signals being sent according to a communication protocol allowing variability in one or more characteristics, the one or more characteristics being frequency characteristics of the identifying signals, and DFT calculations are effected in DFT calculator 142 for recognition of the transmitting modem (col. 6, lines 20-44).

38. Regarding claim 2, the identity of the remote modem is based on the determined frequency characteristics (col. 5, lines 58-60).

Art Unit: 2634

39. Regarding claim 4, the identifying signals are transmitted in synchronism with a training sequence (col. 5, lines 58-60).

40. Regarding claim 5, previously stored receiver parameters and coefficients are retrieved from the identified location based on the identified remote modem, considered to enable a communication feature for better communication.

41. Regarding claim 7, the remote modem is inherently either a digital or an analog modem.

42. Regarding claim 13, Kamerman teaches a master modem receiver 80 that evaluates the frequency characteristics of signals transmitted in synchronism with a training sequence in order to identify the remote modem transmitting to the master modem (col. 5, lines 58-60) using DFT calculations effected in DFT calculator 142 and inherently comprising means for recognition of the transmitting modem based on the DFT calculations (col. 6, lines 20-44), where the identifying signals are signals being sent according to a communication protocol allowing variability in one or more characteristics, the one or more characteristics being the frequency characteristics of the identifying signals.

43. Regarding claims 14 and 15, previously stored receiver parameters and coefficients are retrieved from the identified location based on the identified remote modem, considered to enable performance enhancing and deficiency compensation features.

44. Regarding claim 24, Kamerman teaches a master modem receiver 80 that evaluates the frequency characteristics of signals transmitted in synchronism with a training sequence in order to identify the remote modem transmitting to the master modem (col. 5, lines 58-60) using DFT calculations effected in DFT calculator 142 for recognition of the transmitting modem based on the DFT calculations (col. 6, lines 20-44), where the identifying signals are signals being sent

Art Unit: 2634

according to a communication protocol allowing variability in one or more characteristics, the one or more characteristics being the frequency characteristics of the identifying signals, modem receiver 80 inherently comprises storage elements containing the known frequency characteristics of the different remote modems for comparison to enable the identification of the remote modem that is transmitting.

45. Regarding claim 25, previously stored receiver parameters and coefficients are retrieved from the identified location based on the identified remote modem, which are considered to enable performance enhancing features.

46. Regarding claim 26, the identity of the remote modem is based on the determined frequency characteristics (col. 5, lines 58-60).

47. Regarding claim 27, the identifying signals are transmitted in synchronism with a training sequence (col. 5, lines 58-60), considered to be sent during transceiver training.

48. Regarding claim 29, the device is a modem 80.

49. Regarding claim 33, the modem inherently comprises a general purpose processor.

***Claim Rejections - 35 USC § 103***

50. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

51. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer et al.

52. Regarding claim 8, Bremer et al. teach a technique for automatic identification of a remote modem as described above, but do not disclose that communication is performed in

Art Unit: 2634

accordance with ITU-T Recommendation V.90. However, it would have been obvious to one of ordinary skill in the art to use the identification method of Bremer et al. in a modem system complying with ITU-T Recommendation V.90 in order to utilize non-industry standard features, as taught by Bremer et al. (col. 1, lines 56-60).

53. Claims 16-19, 21, 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamerman.

54. Regarding claim 16, Kamerman teaches a master modem receiver 80 that evaluates the frequency characteristics transmitted in synchronism with a training sequence in order to identify the remote modem which is transmitting to the master modem (col. 5, lines 58-60), where the identifying signals are considered to be signals being sent according to a communication protocol allowing variability in one or more characteristics, the one or more characteristics being frequency characteristics of the identifying signals, and DFT calculations are effected in DFT calculator 142 for recognition of the transmitting modem (col. 6, lines 20-44).

55. Kamerman does not disclose that the steps performed are implemented via instruction sequences stored on computer readable storage medium. However, it is well known in the art to store information in computer readable storage media for execution by a processor. It would have been obvious to one of ordinary skill in the art to store information in an information storage media to implement the method disclosed by Kamerman because a software implementation reduces the need for application specific hardware and allows for changes to be easily implemented without the need for additional hardware.

56. Regarding claim 17, the identity of the remote modem is based on the determined frequency characteristics (col. 5, lines 58-60).

Art Unit: 2634

57. Regarding claim 18, selection of the computer readable medium to be one of a magnetic, optical or electronic storage medium is deemed a design consideration that fails to patentably distinguish over the prior art of record.

58. Regarding claims 19 and 22, previously stored receiver parameters and coefficients are retrieved from the identified location based on the identified remote modem, considered to enable better communication and performance enhancing features.

59. Regarding claim 21, the computer program is considered to be executable on a device having communication capability coupled to the remote communication device.

60. Regarding claim 32, Kamerman teaches a communications system utilizing a modem as discussed above, but does not disclose that the modem is disposed on a single integrated circuit.

61. However, it is well known to implement circuitry on a single integrated circuit to conserve space. Therefore, it would have been obvious to one of ordinary skill in the art to implement the modem of Kamerman on a single integrated circuit to conserve space.

62. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amundson.

63. Regarding claim 32, Amundson teaches a communications system utilizing a modem as discussed above, but does not disclose that the modem is disposed on a single integrated circuit.

64. However, it is well known to implement circuitry on a single integrated circuit to conserve space. Therefore, it would have been obvious to one of ordinary skill in the art to implement the modem of Amundson on a single integrated circuit to conserve space.

***Allowable Subject Matter***

65. Claims 34, 36, 37 and 39-42 are allowed. Claims 35, 38, 43-48 and 50-55 would be allowable if amended to overcome the objections set forth in this Office action.

Art Unit: 2634

66. Claims 6, 20 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(703) 305-0954**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

**Any response to this action should be mailed to:**

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Alexandria, VA 22313-1450

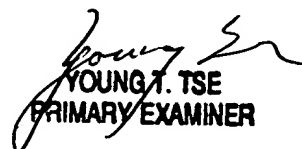
**or faxed to:**

**(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dl  
5/11/04

  
**YOUNG T. TSE**  
**PRIMARY EXAMINER**